

5. "Technically, the operation is less difficult than other cranial operations in that the skull opening is made through the thinnest area of the vault—the squamous portion of the temporal bone.

6. "The vertical incision is preferable to the former curved one in that it renders more possible a careful hemostasis of the scalp by means of the method of bi-manual pressure-traction and the clamping of the main branch of the temporal artery at the very beginning of the operation, whereas the curved incision passes through the various branches of the vessel in the scalp, and they must be clamped individually. Again, the vertical incision not only permits drainage at the lowest point of the skull, but it makes possible a large subtemporal bony opening without risk of loosening the attachment of the temporal muscle and fascia to the parietal crest, insuring a firm closure with no danger of cerebral hernia.

7. "The great frequency of temporo-sphenoidal lesions such as tumors, abscesses, and brain injuries make this routine exposure of the subtemporal decompression a most important aid in the treatment of underlying intracranial lesions."

SOME PRACTICAL POINTS IN RESUME

In the past, and even now, in many places, a suspected head injury is treated only from the standpoint of skull fracture. If an injury to the bony vault is demonstrable, surgery is at once resorted to, whereas if no fracture is found, or if there is a basal fracture, the case is often hopelessly abandoned.

In these injuries about 60 per cent are in shock, and about 10 per cent will die while in shock.

Study of the eye grounds and spinal puncture, with determination of the increased intracranial pressure, are the two crucial tests in determining the condition of patient.

Kocher, many years ago, made observations and recognized four stages from treatment standpoints.

First stage of compression—Medical expectant treatment.

Second stage of compression—Ideal operative stage.

Third stage of compression—Imperative operative stage of medullary compression.

Fourth stage of compression—Non-operative or hopeless stage of medullary edema.

It is imperative not to operate in shock or in the late stage of medullary edema.

Vault fractures often are best done secondary to a subtemporal decompression.

Increased intracranial pressure is the principal criterion as to the necessity for surgery.

Subtemporal decompression should be more frequently done.

Read March 8, 1921.

THE NEUROLOGICAL ASPECTS OF VISCEROPTOSIS.*

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Visceroptosis, not infrequently discovered accidentally in the course of the routine examination, may be present in a marked degree without, apparently, causing a single subjective symptom. Attention is attracted to the alimentary canal be-

cause of the presence of other local conditions such as constipation, indigestion, meteorism or mucous colitis and it has been customary to associate with the visceral ptosis certain distant symptoms, referable especially to the nervous system. Of these, weakness, nervousness, vertigo, syncope and insomnia are said to be the most frequent. It is extremely doubtful, however, if any one of these symptoms may truthfully be said to be due to the ptosis alone. Undoubtedly the whole question has been somewhat clouded by a lack of appreciation of the fact that the individual of the so-called enteroptotic habitus and the otherwise normal individual with more or less visceral ptosis belong in two widely separated groups. In the former or congenital type there is especially noted the long, narrow thorax; the small, central heart, small lungs; pouching of the lower abdomen and faulty station. The respiratory excursion is shallow and costal in type and sudden calls for exertion are attended by an abnormal increase in the pulse rate. Yet, these individuals, in the absence of the interpolation of local or general disease, may go through life without suffering in the least from any symptom referable to their physical defect other than a somewhat limited supply of reserve energy. They early learn to adapt themselves to their capabilities and thus escape that extreme exhaustion which is often the starting point of the train of symptoms which makes these cases familiar to us all.

Individuals in the other group, in which visceral ptosis is to a greater or less extent acquired, always present concomitant disease. These are the cases with relaxation of the abdominal walls, lacerated perineal, lowered position of the hollow viscera as a result of adhesions following inflammatory conditions of the lower abdomen and diminution of visceral and somatic muscle tone following local or general diseases of a toxic nature. It is in this type that recognition of the true clinical picture is attended with difficulty and the real condition is often overlooked because the attention is directed to the accompanying pathology. Too, these patients, habituated to other conditions of health, cannot accept their disability as the natural consequence of an inherent physical trait and there arise abnormal mental attitudes which add to the difficulties of diagnosis and treatment.

Some twelve years ago my attention was drawn to this subject following the description in the literature of a number of operations for the relief of ptosis and excessive mobility of one or another of the abdominal organs. Experience showed that the mere elevation and fixation of a viscus seldom relieved the patient of the symptoms which led to the performance of the operation. Some investigations were undertaken at that time in collaboration with the late Dr. Fayette Watt Birch to determine if other factors were not essential to the syndrome credited to visceroptosis. The results were collected and published in 1912 under the title, "Blood Pressure Observations on Patients with Relaxed Abdominal Musculature."¹ The conclusions arrived at were briefly as follows:

* Read before the San Francisco County Medical Society, April 12, 1921.

¹ The Journal of the American Medical Association, January 27, 1912; vol. 58, pages 265-268.

1. Uncomplicated visceroptosis causes no symptoms.

2. Nervous symptoms such as weakness, dizziness and fainting are the result of cerebral anemia brought about chiefly by interference with venous return from the abdomen and lower extremities, a condition depending, in part at least, upon a disturbance in the normal reciprocal action of the diaphragm and abdominal muscles.

3. Observations of the blood pressure in cases without symptoms may show an abnormal drop in the systolic reading on standing after lying.

4. In cases with cerebral symptoms there will be found a fall in the diastolic as well as the systolic pressure on standing after lying.

Among medical men it is generally believed that these patients rather tend toward the neurotic type and that nervous symptoms are frequent accompaniments of the disorder. In my own mind the impression has grown that there was an enteroptotic syndrome. It seemed that there were frequent complaints of inability to stand well; that in the inactive vertical position there was likely to be an intrusion of subjective sensations of weakness, dizziness and faintness. Many of these patients state that they cannot watch parades, visit exhibitions or stand while having a dress fitted without being threatened with a fainting spell. A reference to the recorded complaints in large groups of cases, however, does not aid materially in the building up of a constant syndrome.

Certain complaints referable to the nervous system recur frequently in the histories of all chronic cases regardless of whether the nervous system is or is not affected to an extent recognizable by ordinary methods of examination. Thus in one thousand cases examined by the Diagnostic Group at St. Luke's Hospital of four frequently occurring complaints nervousness was given in 51 per cent, depression in 20 per cent, weakness in 17 per cent and sleeplessness in 7 per cent of all cases. In the same group a diagnosis of visceroptosis was made 151 times, in forty-two cases this was the primary diagnosis and together with closely associated conditions was assumed to explain the major complaint. Of the forty-two cases the primary complaint was directed to the stomach in 48 per cent, to the intestines in 31 per cent, to nervousness in 12 per cent, to weakness in 12 per cent, to fainting 4.5 per cent and to dizziness 2.5 per cent. In the secondary complaints nervousness occurred in 80 per cent, weakness in 38 per cent, depression in 31 per cent, sleeplessness in 26 per cent. Comparing these figures directly for four complaints will show some variation though perhaps an immaterial one.

For example: Nervousness was recorded in 80 per cent of the Ptosis cases and in 51 per cent of all cases. Weakness, 20 per cent of the Ptosis cases, 17 per cent of all cases. Depression, 45 per cent of the Ptosis cases, 20 per cent of all cases. Sleeplessness, 8 per cent of the Ptosis cases, 7 per cent of all cases.

Fainting was recorded eleven times in the 151 patients. There were thirty-four females in the forty-two cases and eight males, the youngest was

twenty-two years of age and the oldest sixty-nine; average age, forty years four months.

In a condition where disturbances in the circulation are charged with bearing some of the burden of the symptomatology, it would seem that there might be something of interest in an examination of the blood pressure determinations. In forty-two cases the lowest pressure was 90/40 and the highest 178/86. The average systolic was 113, the average diastolic 72.4. Certainly, in the type of case here presented with an average age of forty years and with arterio-sclerosis occurring as a secondary diagnosis thirteen times these pressures are notably low.

Support of the statement that the visceroptotic seldom seeks medical relief until some other pathological condition becomes an added factor will be seen by reference to the diagnoses. Of the forty-two cases in which ptosis was the primary diagnosis and was believed to best explain the major complaint, in only two cases was the visceroptosis the only reported finding. But there were an additional seven cases in which there were no other findings referable to the alimentary canal. Associated conditions directly affecting the digestive apparatus occurred as follows—mucus colitis in 40 per cent, spastic colon in 36 per cent, constipation in 36 per cent and hemorrhoids in 12 per cent. Sources of focal infection occur frequently. Thus the teeth were involved in 45 per cent, the tonsils in 38 per cent and the prostate in two cases. Other diagnoses included pulmonary tuberculosis seven times, arterio-sclerosis thirteen times, arthritis seven times, lacerated perineum seven times. Toxic cardiopathy, neurasthenic state, vasomotor instability and poly-glandular dystrophy were diagnosed each three times.

With several of these pathological conditions existing in the same individual it may appear as if assuming too much to place the burden of the major diagnosis upon visceroptosis, but this has always been done with due respect to the mildness of the associated conditions, to the grouping of the symptoms about the gastro-intestinal tract and an accompanying lack of abdominal muscle support to the splanchnic circulation.

It is undoubtedly true that nervous symptoms frequently depend upon the type of individual concerned and that somatic pathology produces reactions in the psychic sphere in accordance with the already existing mental content. The constant inflowing of abnormal sensory impressions from the great gastro-intestinal field, the subjective sensations of weakness and depression, due on the one hand, to faulty nutrition and on the other hand to an inadequate blood supply to the brain, may be said to account in large part for the mental symptoms so frequently complained of by these patients and which causes them so often to be classed with the neurasthenics. But in the proper interpretation of the whole clinical picture the neurological aspect cannot be separated either in diagnosis or in treatment and for complete results in therapy care of the nervous symptoms must go hand in hand with the treatment of the somatic pathology.

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